CLAIMS

1. An apparatus comprising:

(A) at least one processor;

(B) a memory coupled to the at least one processor;

(C) a shared resource coupled to the at least one processor, wherein sharing of the shared resource is controlled by a shared resource server; and

(D) a resource sharing mechanism residing in the memory and executed by the at least one processor, the resource sharing mechanism including:

a first mechanism that establishes a layer two tunneling protocol (L2TP) tunnel between the shared resource server and a client;

a second mechanism that establishes an outgoing connection from the client through the shared resource via the L2TP tunnel using a plurality of messages defined by a predefined L2TP protocol for the L2TP tunnel; and

a third mechanism that establishes an incoming connection through the shared resource to the client via the L2TP tunnel using a plurality of messages defined by user-defined extensions to the L2TP protocol for the L2TP tunnel.

2. The apparatus of claim 1 wherein the client resides in a second logical partition on the apparatus that is separate from a first logical partition that includes the shared resource.

3. The apparatus of claim 1 wherein the client comprises a computer system coupled to the apparatus via a network connection.

4. The apparatus of claim 1 wherein the shared resource comprises a modem.

5. The apparatus of claim 1 wherein the shared resource comprises a virtual private network (VPN).

6. The apparatus of claim 1 wherein the incoming and outgoing connections are point-to-point connections.

7. The apparatus of claim 1 wherein the plurality of messages defined by the user-defined extensions to the L2TP protocol comprise an accept incoming call request message and an accept incoming call reply message.

8. An apparatus comprising:

(A) at least one processor;

(B) a memory coupled to the at least one processor;

(C) first and second logical partitions defined on the apparatus, the first logical partition including a shared resource server that controls a shared resource;

(D) a resource sharing mechanism residing in the first logical partition, the resource sharing mechanism including:

a first mechanism that establishes a layer two tunneling protocol (L2TP) tunnel between the shared resource server and a client that resides in the second logical partition;

a second mechanism that establishes an outgoing connection from the client through the shared resource via the L2TP tunnel using a plurality of messages defined by a predefined L2TP protocol for the L2TP tunnel; and

a third mechanism that establishes an incoming connection through the shared resource to the client in the second logical partition via the L2TP tunnel using a plurality of messages defined by user-defined extensions to the L2TP protocol for the L2TP tunnel.

9. The apparatus of claim 8 wherein the shared resource comprises a modem.

10. The apparatus of claim 8 wherein the shared resource comprises a virtual private network (VPN).

11. The apparatus of claim 8 wherein the incoming and outgoing connections are point-to-point connections.

12. The apparatus of claim 8 wherein the plurality of messages defined by the user-defined extensions to the L2TP protocol comprise an accept incoming call request message and an accept incoming call reply message.

13. A computer-implemented method for sharing a shared resource between a resource server that controls the shared resource and a client, the method comprising the steps of:

(A) establishing a layer two tunneling protocol (L2TP) tunnel between the resource server and the client;

(B) establishing an outgoing connection from the client through the shared resource via the L2TP tunnel using a plurality of messages defined by a predefined L2TP protocol for the L2TP tunnel; and

(C) establishing an incoming connection through the shared resource to the client via the L2TP tunnel using a plurality of messages defined by user-defined extensions to the L2TP protocol for the L2TP tunnel.

14. The method of claim 13 wherein the client resides in a second logical partition that is separate from a first logical partition that includes the shared resource.

15. The method of claim 13 wherein the client comprises a computer system coupled to the resource server via a network connection.

16. The method of claim 13 wherein the shared resource comprises a modem.

17. The method of claim 13 wherein the shared resource comprises a virtual private network (VPN).

18. The method of claim 13 wherein the incoming and outgoing connections are point-to-point connections.

19. The method of claim 13 wherein the plurality of messages defined by the user-defined extensions to the L2TP protocol comprise an accept incoming call request message and an accept incoming call reply message.

20. A computer-implemented method for sharing a shared resource between a resource server in a first logical partition that controls the shared resource and a client in a second logical partition, the method comprising the steps of:

establishing a layer two tunneling protocol (L2TP) tunnel between the resource server and the client;

establishing an outgoing connection from the client through the shared resource via the L2TP tunnel using a plurality of messages defined by a predefined L2TP protocol for the L2TP tunnel; and

establishing an incoming connection through the shared resource to the client in the second logical partition via the L2TP tunnel using a plurality of messages defined by user-defined extensions to the L2TP protocol for the L2TP tunnel.

21. The method of claim 20 wherein the shared resource comprises a modem.

22. The method of claim 20 wherein the shared resource comprises a virtual private network (VPN).

23. The method of claim 20 wherein the incoming and outgoing connections are point-to-point connections.

24. The method of claim 20 wherein the plurality of messages defined by the user-defined extensions to the L2TP protocol comprise an accept incoming call request message and an accept incoming call reply message.

25. A program product comprising:

(A) resource sharing mechanism including:

a first mechanism that establishes a layer two tunneling protocol (L2TP) tunnel between a shared resource server that controls a shared resource and a client;

a second mechanism that establishes an outgoing connection from the client through the shared resource via the L2TP tunnel using a plurality of messages defined by a predefined L2TP protocol for the L2TP tunnel; and

a third mechanism that establishes an incoming connection through the shared resource to the client via the L2TP tunnel using a plurality of messages defined by user-defined extensions to the L2TP protocol for the L2TP tunnel; and

(B) computer readable signal bearing media bearing the resource sharing mechanism.

26. The program product of claim 25 wherein the signal bearing media comprises recordable media.

27. The program product of claim 25 wherein the signal bearing media comprises transmission media.

28. The program product of claim 25 wherein the client resides in a second logical partition on the apparatus that is separate from a first logical partition that includes the shared resource.

29. The program product of claim 25 wherein the client comprises a computer system coupled to an apparatus that includes the resource sharing mechanism via a network connection.

30. The program product of claim 25 wherein the shared resource comprises a modem.

31. The program product of claim 25 wherein the shared resource comprises a virtual private network (VPN).

32. The program product of claim 25 wherein the incoming and outgoing connections are point-to-point connections.

33. The program product of claim 25 wherein the plurality of messages defined by the user-defined extensions to the L2TP protocol comprise an accept incoming call request message and an accept incoming call reply message.

34. A program product comprising:

(A) a resource sharing mechanism residing in a first logical partition, the resource sharing mechanism including:

a first mechanism that establishes a layer two tunneling protocol (L2TP) tunnel between a shared resource server in the first logical partition that controls a shared resource and a client that resides in a second logical partition;

a second mechanism that establishes an outgoing connection from the client through the shared resource via the L2TP tunnel using a plurality of messages defined by a predefined L2TP protocol for the L2TP tunnel; and

a third mechanism that establishes an incoming connection through the shared resource to the client via the L2TP tunnel using a plurality of messages defined by user-defined extensions to the L2TP protocol for the L2TP tunnel; and

(B) computer readable signal bearing media bearing the partition manager.

35. The program product of claim 34 wherein the signal bearing media comprises recordable media.

36. The program product of claim 34 wherein the signal bearing media comprises transmission media.

37. The program product of claim 34 wherein the shared resource comprises a modem.

38. The program product of claim 34 wherein the shared resource comprises a virtual private network (VPN).

39. The program product of claim 34 wherein the incoming and outgoing connections are point-to-point connections.

40. The program product of claim 34 wherein the plurality of messages defined by the user-defined extensions to the L2TP protocol comprise an accept incoming call request message and an accept incoming call reply message.

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